REMARKS

The present Amendment cancels claim 1 and adds new claims 11-22.

Therefore, the present application has pending claim 11-22.

35 U.S.C. §103 Rejections

Claim 1 stands rejected under 35 U.S.C. §103(a) as being unpatentable over

U.S. Patent Application Publication No. 2002/0083169 to Aki, et al. ("Aki") in view of

U.S. Patent Application Publication No. 2003/0204789 to Peebles, et al. ("Peebles").

As indicated above, claim 1 was canceled. Therefore, this rejection regarding claim

1 is rendered moot.

New Claims 11-22

New claims 11-22 were added to more clearly describe features of the

present invention. Specifically, amendments were made to the claims to more

clearly recite that the present invention is directed to an information processing

system and an information processing method, as recited, for example, in

independent claims 11 and 17.

The present invention, as recited in claim 11, and as similarly recited in claim

16, provides an information processing system. The system includes a storage

apparatus, which has a plurality of storage areas, a first computer, and a second

computer. The first computer includes an application unit, a file system, a volume

management unit, and an operating system unit, where the file system manages

capacity information of the plurality of storage areas and changes the capacity

information based on a read/write request from the application unit. According to the

present invention, the volume management unit monitors the capacity information to

detect a change in the capacity information in the file system and sends a request for

decreasing a data collection interval for collecting the capacity information when the

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change in the capacity information is detected. Also according to the present

invention, the second computer collects the capacity information from the first

computer at the data collection interval which is decreased based on the request

received from the first computer. The prior art does not disclose all of these

features.

A distinctive feature of the present invention is that the determination of

whether the data collection interval is changed or not is based on the monitored

capacity information of the storage areas. In a file system, when a write data to a

new storage area arises in response to a read/write request from an application, the

file system itself makes a change in the capacity information. A volume manager

monitors the changes in the capacity information, and the data collection interval for

the capacity information is decreased if there is a change in the monitored capacity

information. Effective monitoring of the capacity information can be made according

to the above described features of the present invention. In contrast to the present

invention, if the determination of the data collection interval change is not made by

monitoring a change in the capacity information, but is made by monitoring an event

such as a read/write request from an application and the issuing of I/O of a driver

from an operating system, there may be a problem that the data collection interval is

unnecessarily decreased in response to the event of the read/write request or I/O,

with no change of the capacity. That is, even though there is no change in the actual

capacity, the data collection interval is decreased and the data collection frequency

is increased such that the load at the computer is needlessly increased. The present

invention eliminates such problem by monitoring the capacity information.

The above described features of the present invention, as now more clearly

recited in the claims, are not taught or suggested by any of the references of record.

Specifically, the features are not taught or suggested by either Aki or Peebles, whether taken individually or in combination with each other.

Aki teaches a network monitoring system that monitors activities on a network with optimal coverage and frequency, depending on the current state of the network. However, there is no teaching or suggestion in Aki of the information processing system or the information processing method as recited in claim 1, and s similarly recited in claim 17 of the present invention.

Aki's network monitoring system includes a predefined set of rules or conditions, or a "monitoring policy." A monitoring policy setting unit sets a specific monitoring policy that includes which object to watch, which item of that object to monitor, and how frequent the monitoring should be. A monitoring unit carries out monitoring of the network, according to the policy. The monitoring result is passed to a monitoring policy changing unit that changes the current monitoring policy being set in the monitoring policy setting unit. A resource setup changing unit may also reconfigure some related resources on the network according to the reported monitoring result. An event detector detects the occurrence of a particular event in the network resources and notifies the monitoring policy changing unit of the occurrence, so that the monitoring policy will be changed accordingly.

One feature of the present invention, as recited in claim 11 and as similarly recited in claim 17, includes where the volume management unit monitors the capacity information to detect a change in the capacity information in the file system, and sends a request for decreasing a data collection interval for collecting the capacity information when the change in the capacity information is detected. Aki does not disclose this feature. As described in the abstract, Aki discloses a network monitoring system where the monitoring interval is changed based on a result of

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monitoring the network. As described in paragraph [0054] and as shown in Fig. 8, a monitoring interval may be reduced based on a graded service level. This is not the same as decreasing the monitoring interval based on a detected change in the monitored capacity information, as in the present invention.

Therefore, Aki fails to teach or suggest "<u>wherein said volume management unit monitors the capacity information to detect a change in the capacity information in said file system and sends a request for decreasing a data collection interval for collecting the capacity information when said change in the capacity information is detected</u>" as recited in claim 11, and as similarly recited in claim 17.

The above noted deficiencies of Aki are not supplied by any of the other references of record, namely Peebles, whether taken individually or in combination with each other. Therefore, combining the teachings of Aki and Peebles in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Peebles teaches a method and apparatus for generating diagnostic recommendations for enhancing process performance. However, there is no teaching or suggestion in Peebles of the information processing system or the information processing method as recited in claim 11, and as similarly recited in claim 17 of the present invention.

Peebles' diagnostic system monitors the status of other process over a computer network by collecting status and configuration data, analyzing the data, and providing diagnostic recommendations when necessary. The diagnostic system includes a collector module, and analyzer module, and an administration client module. The collector module collects statistical data and configuration data from each monitored process and populates a plurality of source data tables or

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worksheets. The values of the source data are processed by the analyzer module, including component algorithms, which generate a plurality of individual component indexes each associated with a specific aspect of the processes performance. The component indexes are then processed using a weighting algorithm to form a composite index reflecting the overall health of the monitored process. If one or more of the component index values exceed a predefined threshold, the indexes and configuration data are provided to an overall assessment table that identifies the process state that is true and generates one or more diagnostic recommendations, the output of which is stored in memory and is directly accessible to the administration client module. The administration client module enables the display, upon user query, of any of the source data, configuration data, component and composite indexes, and diagnostic recommendations in a variety of different formats, as well as searching for the same using any number of specific queries.

One feature of the present invention, as recited in claim 11 and as similarly recited in claim 17, includes where the volume management unit monitors the capacity information to detect a change in the capacity information in the file system, and sends a request for decreasing a data collection interval for collecting the capacity information when the change in the capacity information is detected. Peebles does not disclose this feature. As described in the abstract, Peebles discloses where a diagnostic system monitors the status of other processes. This is not the same as monitoring the capacity information to detect a change in the capacity information, and requesting to decrease a data collection interval when the change in the capacity information is detected, as in the present invention.

Therefore, Peebles fails to teach or suggest "wherein said volume management unit monitors the capacity information to detect a change in the

capacity information in said file system and sends a request for decreasing a data collection interval for collecting the capacity information when said change in the capacity information is detected" as recited in claim 11, and as similarly recited in claim 17.

Both Aki and Peebles suffer from the same deficiencies, relative to the features of the present invention, as recited in the claims. Therefore, combining the teachings of Aki and Peebles does not render obvious the features of the present invention, as now more clearly recited in the claims. Accordingly, allowance of claims 11-22 is respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the Aki and Peebles references.

In view of the foregoing amendments and remarks, Applicants submit that claims 11-22 are in condition for allowance. Accordingly, early allowance of claims 11-22 is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger & Malur, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 500.43007X00).

Respectfully submitted,

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